



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

DEC 28 2007

Mr. Edward Galbraith, Director  
Water Pollution Control Program  
Water Protection and Soil Conservation Division  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102

Dear Mr. Galbraith:

RE: Permit Limits in Lieu of a TMDL for Bynum Creek (WBID 709) and Dog Creek (WBID 510)

This letter responds to the submissions from the Missouri Department of Natural Resources (MDNR) dated November 7, 2007, and December 10, 2007, regarding Bynum Creek and Dog Creek. Bynum and Dog Creeks were listed as impaired on Missouri's 1998 §303(d) list, for sediment and on the 2002 §303(d) list, for Non-Volatile Suspended Solids (NVSS). MDNR proposes to correct the impairments with National Pollutant Discharge Elimination System (NPDES) permit limits in lieu (PIL) of Total Maximum Daily Loads (TMDLs). The following water body segments are proposed to be corrected through permit limits.

Water Body	WBID	Impairment	Source	Permit #	Year added to list
Bynum Creek	709	NVSS	Martens' Construction Company's South Auxvasse Quarry	MO-0133957	1998
Dog Creek	510	NVSS	Trager Limestone, L.L.C.'s Gallatin Quarry	MO-0134091	1998

Waters require TMDLs when certain pollution control requirements are not stringent enough to implement water quality standards (WQS) for such waters. To exempt an impaired water from the TMDL process, the pollution control requirements cited in the regulation under 130.7(b)(1)(i), (ii), and (iii) must be established and enforced by federal, state, or local laws or regulations, and be stringent enough that, when applied, the receiving water will meet WQS.

In regards to Bynum Creek and Dog Creek, Federal regulations at 40 CFR 130.7(b)(1)(ii) provide that where ["more stringent effluent limitations (including prohibitions) required by either state or local authority preserved by section 510 of the Act, or Federal authority (law, regulation, or treaty)"] are stringent enough to implement WQS, a TMDL is not required. The United States Environmental Protection Agency (EPA), Region 7, has completed its review of

these submissions, and other submitted information supporting these PILs, and concur that TMDLs are not required for these impaired water bodies because the impairments are being addressed through more stringent effluent limitations as per 40 CFR 130.7(b)(1)(ii).


Mertens' Construction Company's South Auxvasse Quarry has been identified as the sole source of the NVSS impairment on Bynum Creek as a result of stream surveys conducted above and below the south quarry. A site specific NPDES permit for Mertens' Construction Company's South Auxvasse Quarry was issued on October 30, 2007. The permit includes a schedule of compliance to commence within 90 days of issuance. Permit limits, which will achieve WQS for NVSS, will be imposed immediately on issuance. In review of the site specific permit, the effluent limits are 70 milligrams per liter (mg/L) daily maximum and monthly average TSS and 1.5 ml/L/hour daily maximum and 1.0 milliliters per liter per hour (ml/L/hour) monthly average Settleable Solids. Additionally, the permit requests instream monitoring with a visual survey of the receiving stream ten yards or less below outfall S1. The permit also includes a reopener clause to allow for stricter limits if monitoring shows WQS violations.

Trager Limestone, L.L.C.'s Gallatin Quarry has been identified as the sole source of the NVSS impairment on Dog Creek as a result of stream surveys conducted above and below the quarry. A site specific NPDES permit for Trager Limestone, L.L.C.'s Gallatin Quarry was issued on November 16, 2007. The permit includes a schedule of compliance to commence within 30 days of issuance. Permit limits, which will achieve WQS for NVSS, will be imposed immediately on issuance. In review of the site specific permit, the effluent limits are 70 mg/L daily maximum and monthly average TSS and 1.5 ml/L/hour daily maximum and 1.0 ml/L/hour monthly average Settleable Solids. Additionally, the permit requests instream monitoring with a visual survey of the receiving stream ten yards or less below outfall S1. The permit also includes a reopener clause to allow for stricter limits if monitoring shows WQS violations.

Enclosed with this letter are the Region 7 4b Rationale Documents which summarize EPA's approval of the PILs. EPA believes the separate elements of the PILs described in the enclosed forms adequately address the pollutant of concern.

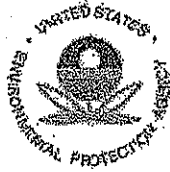
If you have any questions or concerns in regards to this matter, please do not hesitate to contact Tabatha Adkins at (913) 551-7128.

Sincerely,

  
for William A. Spratlin  
Director  
Water, Wetlands, and Pesticides Division

Enclosure

cc: John Hoke, MDNR  
Rob Morrison, MDNR  
Phil Schroeder, MDNR



## EPA Region 7 4B Rationale

**Water body ID(s):** MO\_0510 **State:** MO  
**Water body Names(s):** DOG CREEK  
**Pollutant(s):** NON-VOLATILE SUSPENDED SOLIDS (NVSS)  
**HUC(s):** 10280101  
**Basin:**  
**Tributary(ies):**  
**First Listing Cycle:** 2002  
**Submittal Date:** 12/10/2007 **Approved:** Yes

### Submittal Letter

*State submittal letter indicates final Maximum Daily Load(s) for specific pollutant(s)/water(s) were adopted by the state, and submitted to EPA for approval under section 303(d) of the Clean Water Act. Include date submitted letter was received by EPA and date of receipt of any revisions.*

The United States Environmental Protection Agency (EPA) received this submittal with cover letter, check list, final permit, stream survey data and fact sheet on December 10, 2007.

### Concern

*A statement of the problem causing the impairment.*

The sole source of the impairment is Trager Limestone, L.L.C.'s Gallatin Quarry (permit numbers: originally general permit MO-G490249 and now site specific permit MO-0134091). The listing was based on stream surveys conducted in 1997 and 2000. Specifically eroding mine waste materials and stockpiles at the quarry were listed as the sole source of the impairment. Mineral solids coming from eroding mine waste materials and stockpiles get into the stream and settle on the bottom, smothering natural substrates, aquatic invertebrates and fish eggs.

### Implementation Strategy

*A description of the proposed implementation strategy and supporting pollution controls necessary to achieve WQS, including the identification of point and nonpoint source loadings that when implemented assure the attainment of all applicable WQS.*

A site specific permit was issued on November 16, 2007 to replace the previous general permit. Permit limits include 70 mg/L daily maximum and monthly average for TSS and 1.5 ml/L/hour daily maximum and 1.0 ml/L/hour monthly average for Settleable Solids. This WLA will ensure that water quality standards (WQS) will be achieved through the narrative standards for NVSS.

### Time

*An estimate or projection of the time when WQS will be met.*

November 16, 2007 when the Gallatin Quarry was issued the new limits by the site specific permit, WQS should be achieved in Dog Creek.

**Schedule**

*A reasonable schedule for implementing the necessary pollution controls.*

The site specific permit was issued November 16, 2007 and replaces all previous general permits. The Gallatin Quarry permit limits remained the same for TSS and Settleable Solids but require all three outfalls to have the same discharge parameters. The final effluent limits will become effective the date of permit issuance (November 16, 2007). The permit also includes a schedule of compliance for the permittee to develop a Storm Water Pollution Prevention Plan (SWPPP) within 30 days of issuance, implement all conditions of the SWPPP, install secondary containment or remove the on-site petroleum storage tanks, submit a plan for removal of mined material from the stream banks of Dog Creek, all within 90 days of issuance, relocate stockpiles of mined material to eliminate erosion within 120 days of issuance, and complete removal of mined material from the stream banks of Dog Creek within 90 days of MDNR approval of the plan.

**Monitoring**

*A description of, and schedule for, monitoring milestones for tracking and reporting progress to EPA on the implementation of the pollution controls.*

Instream monitoring will consist of a visual survey of the receiving stream at outfalls S1 and S2. Visual surveys will include monthly examination of the nearest downstream riffle and the nearest downstream pool, from the locations listed above, each a section ten feet long by ten feet wide (if the wetted area is less than ten feet, the examined area will encompass the entire stream width). Surveyor shall note and include the date and weather conditions. The report will include estimated percent fines for each riffle and pool, and be submitted with the monthly discharge monitoring reports to ensure permit limits are being met and WQS are achieved.

**Commitment to Revise**

*A commitment to revise, as necessary, the implementation strategy and pollution controls if progress towards meeting WQS is not being shown.*

A reopener clause has been included in the permit to allow for incorporation of stricter effluent limits if monitoring shows that WQS are not being achieved.

\*\*\*\*\* **Pollution control requirements in the submittal** \*\*\*\*\*

National Pollution Discharge and Elimination System (NPDES)

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No.	MO-0134091
Owner:	Mike Trager
Address:	6468 Highway Y, Chillicothe, MO 64601
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Trager Limestone L.L.C.
Facility Address:	21008 Unity Avenue, Gallatin, MO 64640
Legal Description:	See Page 2
Latitude/Longitude:	See Page 2
Receiving Stream:	See Page 2
First Classified Stream and ID:	See Page 2
USGS Basin & Sub-watershed No.:	See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

See Page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

November 16, 2007

Effective Date

November 15, 2012

Expiration Date  
MO 780-0041 (10-93)

A handwritten signature in black ink, appearing to read "Doyle Childers".

Doyle Childers, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

A handwritten signature in black ink, appearing to read "Edward Galbraith".

Edward Galbraith, Director of Staff, Clean Water Commission

Outfall #001 - Storm water from limestone quarry - SIC #1422

Legal Description: NW ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950325/-09400099

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #002 - Storm water from limestone quarry - SIC #1422

Legal Description: NW ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950279/-09400028

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #003 - Storm water from limestone quarry - SIC #1422

Legal Description: SE ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950246/-09359579

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #S1 - SIC #1422

Instream monitoring

Samples to be collected at crossing of county road 210 over Dog Creek upstream of outfall 001

Legal Description: NW ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950377/-09400138

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #S2 - SIC #1422

The first down stream pool and riffle from outfall 003. See D. RECEIVING WATER MONITORING CONDITIONS

Legal Description: SE ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950246/-09359579

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 3 of 7	
					PERMIT NUMBER MO-0134091	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall 001, 002, 003</u>						
Flow	gpd	*		*	once/month	24 hour estimate
Total Suspended Solids	mg/L	70		70	once/month	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/month	grab
Oil and Grease	mg/L	15		10	once/month	grab
Total Petroleum Hydrocarbons	mg/L	10		10	once/month	grab
pH – units	SU	**		**	once/month	grab
<u>Outfall S1 &amp; S2</u>						
Visual Survey (see Receiving Stream Monitoring)		*		*	once/month	report
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2008</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

\* Monitoring requirement only.

\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

C. SPECIAL CONDITIONS

1. This permit does not authorize mining activity, only water discharges that result from mining activity. A permit authorizing mining activities must be obtained from the Land Reclamation Program.
2. This permit does not authorize discharges of waste material, such as concrete and water from washing of concrete delivery trucks, into waters of the state. This permit does not authorize discharges to waters of the state from any location other than the outfalls described on page one of this permit.
3. This permit does not authorize the discharge of waters with added detergents, acids, caustics, solvents, or other additives, except as allowed under Applicability #2 above.
4. Storm water samples shall be collected within the first 60 minutes of storm events of 0.1 inches or greater, that result in a discharge.
5. If a discharge does not occur during the reporting period, the permittee shall submit a report of no discharge to the department.
6. This permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The purpose of the SWPPP is to prevent pollution to waters of the state and comply with the effluent limitations and other permit conditions. The SWPPP must be prepared within 30 days, and implemented by the permittee within 60 days, of the permit issuance. Provisions of the SWPPP developed by the permittee become permit requirements and must be complied with at all times. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities.  
(Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.

The SWPPP must include the following:

- (a) An assessment of all storm water discharges.
  - (b) All aspects of quarry operations, including stockpiles, dewatering activities, vehicle washing/rinsing, and chemical and fuel storage procedures are required to be addressed under the conditions of this section.
  - (c) A listing of Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater, especially waste fines.
  - (d) A schedule for implementing the BMPs, if necessary.
  - (e) The SWPPP must include a schedule for inspection by facility staff, at least once per month, of all storm water pollution prevention structures, storm water and wastewater treatment structures, and of the facility in general to ensure that structures are properly maintained and effective, and that any Best Management Practices are continually implemented and effective. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days and the Department must be notified by letter. Inspection shall be documented in written reports or checklists, and must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
  - (f) A provision for designating an individual to be responsible for environmental matters. The permittee shall notify the department in writing of a personnel change for this position. One individual may be the contact for multiple facilities so long as that person can effectively communicate with the department on every facility.
7. The purpose of the SWPPP and the BMPs listed therein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR20-2.010(56)] of waters of the state, and corrective action means the facility took steps to eliminate the deficiency.
  8. Any fueling facilities present on-site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.
  9. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provisions of RCRA and CERCLA.



C. SPECIAL CONDITIONS (continued)

10. Permittee shall provide sediment and erosion control sufficient to prevent pollution to waters of the state and comply with the effluent limitations and other permit conditions. This may require the construction of properly designed sediment basins or other treatment structures. The permittee shall not allow mined material, waste material, or overburden to enter waters of the state.
11. If vehicle or equipment washing/rinsing is conducted at the facility or other similar process wastewater is generated, permittee shall treat the resulting wastewater prior to discharge to waters of the state in order to meet the effluent limitations and other permit conditions.
12. If dumping or disposal of waste concrete is conducted at the facility, permittee shall prevent the material from entering waters of the state. Any resulting wastewater or leachate from these activities must be treated prior to discharge. Discharging these materials into waters of the state during off site activities is also prohibited.
13. Permittee shall prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment maintenance, or warehousing activities and thereby prevent the contamination of storm water from these substances.
14. Permittee shall store all paint, solvents, petroleum products, petroleum waste products, and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water, or provide other prescribed BMPs such as plastic lids, portable spill pans or containment to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
15. Permittee shall maintain records of all pumped discharges that enter surface waters of the state, such as dewatering activities. These records must include an estimate of the volume, the date and time(s), and the location of each discharge.
16. All outfalls must be clearly marked in the field.
17. Monitoring of additional locations or further improvements may be required if department staff determine that the improvements at this facility are not adequate to protect water quality.
18. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C), and (D), 304(b)(2) and 307(a)(2) of the Federal Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) Controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test, or other information indicates changes are necessary to assure compliance with Missouri Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's current 303(d) List.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

C. SPECIAL CONDITIONS (continued)

19. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (a) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (5) There shall be no significant human health hazard from incidental contact with the water;
  - (6) There shall be no acute toxicity to livestock or wildlife watering;
  - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247.

D. RECEIVING WATER MONITORING CONDITIONS

- 1. Instream monitoring shall consist of a visual survey of the receiving stream at outfalls S1 and S2 as noted on page 2 of this permit. In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department.
- 2. Each visual survey shall include examination of the nearest downstream pool\* and the nearest downstream riffle\*\* (see definitions of pool and riffle below) from the locations indicated in condition #1., above. This means there will be a total of four areas examined. The permittee shall choose a 10-foot-long by 10-foot-wide square section of the wetted stream area of both the pool and riffle. In the event that the wetted stream width is less than 10 feet wide, the area examined shall be 10 feet long and encompass the entire stream width.
- 3. For each pool and riffle at each site, report the estimated percent (0-100%) of the stream bottom covered by light colored limestone fine material washed from the permitted facility.
- 4. On your data sheets, report this under, "Visual survey of bottom sediments," and report your finding as a percent. This report shall be submitted with your monthly discharge monitoring reports.
- 5. When conducting in-stream monitoring, the permittee shall record the date, weather conditions and submit them with the visual survey.
- 6. The exact same site location for each pool and each riffle shall be examined during each survey. A durable marker shall be placed at the survey locations that will survive weather and high water events. Should hydrologic changes, such as natural stream meandering, require a change in monitoring location, please contact the department.
- 7. Should the permittee require additional instructions or training, please contact the department.

\*Pool: That portion of a stream that is relatively deep and slow moving.

\*\*Riffle: The portion of the stream characterized by a steep descent in the streambed and where the water breaks over rocks and/or boulders.

E. SCHEDULE OF COMPLIANCE

1. Within 30 days of issuance of this permit, permittee shall develop a Storm Water Pollution Prevention Plan (SWPPP), as detailed in SPECIAL CONDITIONS #6. This SWPPP shall be submitted to the department for review and approval.
2. Within 90 days of issuance of this permit, permittee shall have implemented all conditions of the SWPPP, including any changes required by the department.
3. Within 90 days of issuance of this permit, permittee shall install appropriate secondary containment for the petroleum storage tanks onsite, or remove the storage tanks. Please contact the department's Hazardous Waste Program for construction requirements.
4. Within 90 days of issuance of this permit, permittee shall submit a plan (hereinafter, Plan) to the Department of Natural Resources for removal of the mined material from the stream banks of Dog Creek. The permittee shall incorporate any changes recommended by the department as amendments to the Plan.
5. Within 120 days of issuance of this permit, the permittee shall have relocated the stockpiles of mined material so as to eliminate erosion of this material into Dog Creek.
6. Within 90 days of the department's approval of the Plan, the permittee shall have completed removal of the mined material from the banks of Dog Creek in accordance with the Plan, as amended.

## Missouri Department of Natural Resources Factsheet

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). NPDES operating permits are issued for a period of five (5) years unless otherwise specified.

A Factsheet gives pertinent information regarding the applicable regulations, rational for the development of the NPDES Missouri State Operating Permit (operating permit), and the public participation process for operating permit listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Major ☐, Minor ☐, Industrial Facility ☒; Variance ☐;  
Master General Permit ☐; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

### Facility Information

NPDES #: MO-0134091  
Facility Name: Trager Limestone L.L.C.  
Address: 21008 Unity Avenue, Gallatin, MO 64640  
Owner's Name: Mike Trager  
Owner's Address: 6468 Highway Y, Chillicothe, MO 64601

Facility Region: Kansas City  
Facility County: Daviess

Facility Type: Quarry  
Facility SIC Code(s): 1422

Facility Description: Limestone quarry.

Application Date: N.A.  
Expiration Date: N.A.  
Last Inspection: 3-21-07 In Compliance ☐; Non-Compliance ☒

### OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001, 002, 003	Varies	Primary	Industrial Storm water	0.0

Outfall #001 - Storm water from limestone quarry - SIC #1422 (former pumping site)  
Legal Description: NW ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950325 /-09400099

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #002 - Storm water from limestone quarry - SIC #1422

Legal Description: NW ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950279/-09400028

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #003 - Storm water from limestone quarry - SIC #1422

Legal Description: SE ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950246/-09359579

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #S1 - SIC #1422

Instream monitoring

Samples to be collected at crossing of county road 210 over Dog Creek upstream of outfall 001

Legal Description: NW ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950377/-09400138

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Outfall #S2 - SIC #1422

The first down stream pool and riffle from outfall 003. See D. RECEIVING WATER MONITORING CONDITIONS

Legal Description: SE ¼, NW ¼, Sec. 13, T58N, R28W, Daviess County  
Latitude/Longitude: +3950246/-09359579

Receiving Stream: Dog Creek (C)  
First Classified Stream and ID: Dog Creek (C) (0510) 303(d) List  
USGS Basin & Sub-watershed No.: (10280101 - 170001)

Water Quality History: Dog Creek is on Missouri's 1998 303(d) List for sediment and on the 2002 303(d) List for nonvolatile suspended solids. The sole source of this pollution is storm water runoff from the Trager limestone quarry.

Comments: If the facility installs and maintains appropriate BMPs, and complies with the effluent limits contained in this permit, impacts to Dog Creek should be eliminated. Extensive remediation and site work will be necessary in order to begin this process. Material will need to be removed from the stream banks, stockpiles of waste fines and gravel relocated, storm water flow redirected, and BMPs installed.

The department has determined that the dam that had been constructed on Dog Creek by this facility should be allowed to deteriorate naturally. If the facility attempted to remove the dam now, the resulting hydrologic changes to the stream could cause headcutting and greater impacts to Dog Creek. The dam has already begun to fail, with large rocks having been washed out of the dam and downstream. The facility should not continue to maintain the dam.

**Receiving Stream Information**

Please mark the correct designated waters of the state categories of the receiving stream.

All Other Waters [10 CSR 20-7.015(8)]:

Yes ☒; No ☐

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

**RECEIVING STREAM(S) TABLE:**

WATER BODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Dog Creek	C	0510	LWW, AQL, WBC(B)***	10280101	Central Plains\Grand\Chariton

\* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery (CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND).

\*\* - Ecological Drainage Unit

\*\*\* - UAA has not been conducted.

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Dog Creek (C)	0.0	0.0	0.1

**MIXING CONSIDERATIONS:**

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

**RECEIVING STREAM MONITORING REQUIREMENTS:****Site S1.**

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Presence/absence of solids as a percentage	once/month	visual survey	crossing of county road 210 over Dog Creek, approximately 338 meters upstream of outfall 001

**Site S2.**

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Presence/absence of solids as a percentage	once/month	visual survey	The first down stream pool and riffle from outfall 003. See D. RECEIVING WATER MONITORING CONDITIONS

Comments: Instream monitoring required to verify efficacy of Best Management Practices and treatment devices  
demonstrating that the receiving stream has returned to compliance with water quality standards.

## **Rationale and Derivation of Effluent Limitations & Permit Conditions**

### **ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); CFR §122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions. (Staff may also add or remove any language needed)

☒ - All limits in this Factsheet are at least as protective as those previously established; therefore, backsliding does not apply.

☐ - Backsliding proposed in this Factsheet for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 §CFR 122.44.

### **ANTIDEGRADATION:**

Policies which ensure protection of water quality for a particular water body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Antidegradation plans are adopted by each State to minimize adverse effects on water.

Not Applicable ☒;

Applicable, but deferred ☐;

As per [10 CSR 20-7.031(2)(D)], the three (3) levels of protection provided by the antidegradation policy in subsections (A), (B), and (C) of this section shall be implemented according to procedures developed by the department. The *Missouri Antidegradation Rule and Implementation Procedure*, when approved, shall be applicable to new or upgraded/expanded facilities only.

### **APPLICABLE PERMIT PARAMETERS:**

Effluent parameters contained in Factsheets and Missouri State Operating Permits are obtained from Technology Based Effluent Limit (TBEL), Missouri's Effluent Regulations [10 CSR 20-7.015], Missouri's Water Quality Standards [10 CSR 20-7.031], previous Missouri State Operating Permits, and from Operating Permit Applications.

### **BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:**

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

Applicable (renewal and modifications to existing operating permits) ☐;

This facility has been approved to land apply as per Permit Standard Conditions III and a department approved bio-solids management plan.

Applicable (new operating permits) ☐;

The permittee has proposed that sludge and bio-solids are not to be removed by a contract hauler for this facility. The permittee has proposed to land apply the sludge and bio-solids as per the Permit Standard Conditions Part III. The department has reviewed and approved the permittee's bio-solids management plan and therefore is approved to land apply said sludge and bio-solids as a means of treatment or disposal.

Not Applicable ☒;

This condition is not applicable to the permittee for this specific facility.

**COMPLIANCE AND ENFORCEMENT:**

Action taken by the department to resolve violations of the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

Applicable ☒;

The permittee is under enforcement action at this time for multiple violations of Missouri Clean Water Law.

Not Applicable ☐;

The permittee/facility is not under enforcement action and is considered to be in compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

Applicable ☐;

A RPA was conducted for this facility for (parameters) and determined that this facility has the potential to cause or contribute to violations of Water Quality. Please see APPENDIX C - RPA RESULTS.

Not Applicable ☒;

A RPA was not conducted for this facility.

**REMOVAL EFFICIENCY:**

Removal efficiency is one method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD<sub>5</sub>) and Total Suspended Solids (TSS) for domestic wastewater sources.

Applicable ☐;

Secondary Treatment is 85% removal [40 CFR 133.102(a)(3) & (b)(3)].

Applicable ☐;

Equivalent to Secondary Treatment is 65% removal [40 CFR 105(a)(3) & (b)(3)].

Not Applicable ☒;

This facility is not required to meet a designated removal efficiency.

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Applicable ☒;

The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations where established in accordance with [10 CSR 20-7.031(10)].

Not Applicable ☐;

This permit does not contain a SOC.

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Applicable ☒;

A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

Not Applicable ☐;



At this time, the permittee is not required to develop and implement a SWPPP.

**VARIANCE:**

As per the Missouri Clean Water Law §644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Applicable ☐;

Not Applicable ☒;

This operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the department to release into a given stream after the department has determined to total amount of pollutant that may be discharged into that stream without endangering its water quality.

Applicable ☐;

Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration

Cs = upstream concentration

Qs = upstream flow

Ce = effluent concentration

Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Not Applicable ☒;

Wasteload allocations were not calculated.

**WLA MODELING:**

Applicable ☐;

Not Applicable ☒;

A WLA study was either not submitted or determined not applicable by department staff.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

As per [10 CSR 20-7.031(1)(CC)], a toxicity test conducted under specified laboratory conditions on specific indicator organism; and as per [40 CFR §122.2], the aggregate toxic effect of an effluent measured directly by a toxicity test.

Applicable ☐;

Effective July 15, 2005, upon revision, renewal, modification, or issuance, all Missouri State Operating Permits under the NPDES will incorporate use of the following guidelines for determining the applicability and requirements for WET testing. WET testing requirements are established by the WET Test Policy, §308 of the Federal Water Pollution Control Act, and 40 CFR §136. Please check WET tests applicability for this facility:

- All major discharge facilities ☐;
- Facilities that are exceeding or routinely exceed their design flow ☐;
- Most municipals, domestic sewage dischargers ☐;
- Industrial dischargers or other dischargers that may alter their production processes throughout the year ☐;
- Facilities that may handle large quantities of toxic substances, or substances that are toxic in large amounts ☐; and
- Facilities that have been granted seasonal relief of numeric limitations ☐.

Not Applicable ☒;

At this time, the permittee is not required to conduct WET test for this facility.

**303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):**

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) List helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) List, then a watershed management plan will be developed that shall include the TMDL calculation

Applicable ☒;

Dog Creek is listed on the 1998 Missouri 303(d) List for sediment, and on the 2002 303(d) List for nonvolatile suspended solids.

This facility was considered the sole source of the above-listed pollutant(s).

Not Applicable ☐;

This facility does not discharge to a 303(d)-listed stream.

**Outfall #001, 002 & 003****EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
TOTAL SUSPENDED SOLIDS	MG/L	8/9	70		70	NO	
SETTLEABLE SOLIDS	ML/L/YR	8/9	1.5		1.0	NO	
pH (S.U.)	SU	1/2/3	6.5-9		6.5-9	YES	6.5-9.0
TOTAL PETROLEUM HYDROCARBONS	MG/L	2/8	10		10	YES	**
OIL & GREASE (MG/L)	MG/L	1/2/3	15		10	NO	

\* - Monitoring requirement only

\*\* - parameter not established in previous permit

**Basis for Limitations Codes:**

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
6. Antidegradation Policy
7. Water Quality Model
8. Best Professional Judgement
9. TMDL or Permit in lieu of TMDL

**OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Total Suspended Solids (TSS)** Effluent limitations have been retained from previous state operating permit, and are considered protective of instream water quality.
- **Settleable Solids** Effluent limitations have been retained from previous state operating permit, and are considered protective of instream water quality.
- **pH** Effluent limitation has been established in accordance with water quality standards. [10 CSR 20-7.031(4)(E)].
- **Total Petroleum Hydrocarbons** Effluent limitation for protection of aquatic life and general criteria. [10 CSR 20-7.031(3)] This effluent limit required because of large petroleum storage tanks on site.
- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

**Administrative Requirements**

On the basis of preliminary staff review and the application of applicable standards and regulations, the department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

**PUBLIC NOTICE:**

As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the Federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

The Public Notice period for this operating permit ran from 8-20-07 to 9-20-07. Minor changes were made to the permit after public notice to correct grammatical and typographical errors.

**Date of Factsheet:** 7-17-07

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